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$5^{9^{n} \text { Buggy }}$
$2 a^{2}$
4

COMAMOTHORE 64


ANIROG SOFTWARE




## 



# Onahostil Rlanet deep inspace an earth pàrol is marooned. Only one person can save it 

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## Briefly

Atari-style joysticks can be used on the Electron with a new plag-in interface carridge Irom FBC Syments. 1 r costs 224.95 and the company anys it has been talking to software houses about compatible software. FBC Systems, 10 Main Centre, Derby DEl 2PE

## - -

Sir Clive Sinclair has signed deal allowing assembly and distribution of Spectrums and ZX81s in South Korea. Sinclair Research will supply components to Samsung Electronics and the first products are expected on sale later this year.
Sinclair Research, Camberley, Surrey

Aquarius User is a new monthly magazine for owners of the £S0 micro, edited by the ex-editor of Which Micro? Colin Barker. Subscription is $E 12$ a year and the publishers plan to encourage newsagent sale as well.
Aquarius User, Computer Marketplace, 20 Orange St, London WC2H 7ED - -

Acorn has bought 100 pages on Micronet 800 to provide subscribers with information on its products, prices and personnel.
Micronet 800, Telemap, 155 Farringdon Rd, London ECIR $3 A D$

## - -

Four eductional games in five European languages are on a new program marketed by SoftShop for the Commodore 64, 48 K Spectrum and Oric/Atmos. Four Games for Children covers" addition, subtraction, spelling numbers and the ailphabet and costs $£ 9.95$.
SofiShop International, Unit 301, 16 Brune St, London EI 7 NJ

Your Commodore 64 can hold a conversation and even write programs for you, according to Sunshine, which has just published Artificial Intelligence on the Commodore 64. The book costs $£ 6.95$ and was written by father-and-son team Keith and Steven Brain.
Sunshine, 12/13 Little Newport St, London WC2R 3LD


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Divishomal Adverlisement Manger: Coleen Pimm
Advertisemenl Mamager: Ricky Holloway
Assignon Adverlisecment Manager: Stuart Shietd
Classified Advertleing: Debra Stupple

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Find the words and you could win it share of $£ 1,000$-worth of great Silversoft games in this week's competition.


Programs for all these computers are in this week's kssue.


# Price rise 

From front page
Bandersnatch and Cyclapse, for the Spectrum and the Commodore 64.

Although still on cassette, they will be boxed along with other items, like maps and detailed playing instructions.
Mr Everiss said lmagine believed software sold as cassettes alone had reached its limit and more now hed to be offered to customers.

A by-product is that piracy woutd be less likely because the other items in the boxes would be essential to use the games.

Mr Everiss said Imagine had also developed a system making its products nearly impossible to copy.
He agreed that the price cuts were to clear the decks and said that, at $£ 3.95$, the sofiware was a bargain.

The company did not know exactly how much the future releases - due out in about three months - would cost, but it was spending $£ 50,000$ on marketing.
Virgin Games boss Nick Alexander, who is also chairman of the Guild of Software Houses, said when he heard the news: "I don't understand at all. What's the logic behind that?
"I'm totally amuseç and bemused by Imagine's twisting and turning. First they drop their prices and the next minute they are making them too high.
"While I applaud their move away from lower prices. Ithink they have over-teacted in the opposite direction. They will find it very hard, no matter what the extras, to sell games at £15:"
Rod Cousens, managing director of Quicksilva, said his company did not pian to move from its pricing policy which puts a Spectrum game at $£ 6.95$.
The exceptions would be programs like its Games Designer and Ultisynth, a synthesiser for the Commodore 64.

Bob Simpson, head of PCS Distribution, believes the prices will be about $£ 15.50$ and $£ 19,50$. He said: "lmagine are claiming these programs are completely innovative. If that's the case it's marvellous and good for the industry."

He said they would have to offer at least the value of the packs from Phoenix Software, where an arcade game and an adventure are boxed in a videosized case for $£ 9.95$.

Imagine, 5 Sir Thomas St, Liverpool L1 6BW

## Nine tracks

From fromt page
pay for the cheapest floppy dise systems."

Phloopy costs £114 and the interface, which runs up to eight drives, is $£ 29.90$. Tape cartridges cost $£ 3$ - $£ 3.50$ depending on quantity.

Up to LOOK can be stored, says Phi Mag, and accessed in three to four seconds. Transfer rate is 10 K per second, around 200 times faster than cassettes.

At present the system works only on the BBC computer, but Phi Mag plans to make it available for other popular home micros.

Phi Mag says the speed and reliability are due to a ninetrack recording head recording one byte across the quarter-inch width of the tape -and an error-checking system controiled by an on-board processor.

Phloopy has its own Loop Filing System, using the standard BBC filing system, BASIC commands and its own commands, prefixed by an asterisk.
The continuous loop of tape is driven at 15 inches per second and, says Phi Mag, touches the cartridge wall only occasionally, so tape lubricant is not needed.

Programs or text files from cassette can be transferred.

Mr Lucas said his company was talking 10 software companies about supplying software on the new cartridges.
Fitting the system means inserting plugs into two other sockets and cutting two resistors.

Once installed, the Phloopy system plugs into the BBC's dise port and a second plug goes into the power output socker.

Phi Mag says the installation should not take more than 20 minutes.

The company says that, with production under way at its Falmouth plant, mail order sales will start within two months.

Phi Mag Systems, Tregoniggie Industrial Estate, Falmouth, Cornwalf TRH $4 R Y$


Cut-away view of the Phloopy system shows the 12 ft tape loop and, at rear, the error-checking processor.

## You could be on Our pages <br> wowecome roverams, articese non tiso from

 our readers.PROCRAMS must always be sent on cassette. Listings are helpful, but not necessary. Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.
ARTICLES on using home computers should be no longer than 2,000 words. Don't worry about
your writing ability - just try to keep to the style in NCW. Articles most likely to be published will help our readers made better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.
TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

## Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number If you can.

Paul Liptrot, Home Computing Weekly, No. 1 Golden Square, London W1R 3AB

## Colour coded

Jet Set Willy, Matthew Smith's follow-up to the chart-topping Manic Miner, runs only when a cqlour code, found on the inlay card, is input by the player.

Software Projects says this is a bid to lessen piracy. Jet Set Willy, which has a competition detailed on the inlay, was originally due out in December.

It runs on the 48 K Spectrum along with the company's other new games, Tribble Trouble and Orion. Dinky Doo, new for the Commodore 64, plays a tune while loading.

Software Projects, Bear Brand Complex, Allerton Rd, Woolton, Liverpool L25 7SF

The inaugural meeting of the Society of Software Authors, affiliated to the Computer Trade Association, will be held at the Studio Theatre, Kenneth More Theatre, Oakfield Rd, Ilford, Essex, on May 5, starting at 1 pm . Subscription: $£ 10$ per year.
Dorene Cox, acting treasurer, Society of Soffware Authors, 7 Meadway $\mathrm{Cr}_{\text {, }}$ Whalebone Lane South, Dagenham, Essex

Turbo, an extended BASIC for the Commodore 64 at $£ 14.95$, is said to offer 45 instructions to make the computer easier to use.
Aztec, 18 Gregory Springs La, Mirfield, W. Yorks WF14 8LE

Logo, the educational programming language, has been brought out for the Spectrum by Kuma and for the Atari. The Spectrum version is on tape for 29.95 and Atari's is on cartridge at $£ 59.99$, including two 200-page manuals,
Kuma, Unit 12, Horseshoe Pk, Horseshoe Rd, Pangbourne, Berks RG8 7JW.
Atari, Railway Terr, Slough, Berks SL2 5BZ

Longmans is adding two books to its series on using home computers: The BBC Micro Guide and, due out in three weeks, The Electron Micro Guide. Both are by Grahame Blackwell, director of the Ivybridge Educational Computing Project, South Devon, and cost $£ 2.95$.
Longman, Burnt Mill, Harlow, Essex CM20 2JE


Kenilworth Software is planning to bring out a magazine on tape for users of the T1-99/4A in May/June. Kenihworth Software, 9 Dencer Dr, Knights Meadow, Kenilworth, Warks CV8 2QR

Forthcoming shows: Microfair, April 28, Alexandra Palace, North London; 5th Annual Commodore Computer Show, June 7-9, Novotel London (formerly Cunard International Hotel), Hammersmith: Personal Computer Games Easter Show, April 20-22, Solihull Conference Centre, Homer Rd, Solihull; What Micro? DT Barnardos Show, July 14-15, Battersea Pk, London.

Virgin Games' Nick Alexander has just returned from Hungary where he had talks with Andromeda, the software house that produced Chinese Juggler, about importing new games.
Virgin, 61-63 Portobello Rd, London W1I 3DD
After the game of the book, the book of the game of the book. Melbourne House has brought our A Guide to Playing The Hobbit. Priced at $£ 3.95$, it outlines strategies and sactics and some, but not all, solutions. Melbourne House also publishes the game tape for the 48 K Spectrum, Commodore 64, Oric and BBC.
Melbourne House, Castle Yard House, Castle Yard. Richmond, Surrey TWIO 6 TF

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Tel. Hastings (0424) 53283

## Get it right, Sir Clive

Every two years or so that special time comes round again when - in classic Sinclair style - Sir Clive and his crew unleash their latest and greatest home computer.

Waiting for it is a mob of anticipating and impatient computer freaks like me who will buy anything with the wonderfuly angular Sinclair logo on the side.

Will the QL meet our expectations? Perhaps.
It certainly sounds good, but so do a lot of other things when we first read about them in the hastilywritien and hazy first impression reports. The reviews rave about a computer that nobody, including the writer, knows a lot about.

There are mysterious and conflicting reports of chip names, memory capacify and cosi unill, finally, the official literature arrives. Happy would-be customers tear open the envelopes and scratch their heads in confusion when they find, for example, that it cosis $£ 100$ more than they had heard.

Thankfully, that initial period is over for the QL and the solid facts have settled down to a basic list. And a very sood list it is too: 128 K RAM 196 usable after 32 K for screen display is subtracted), eight colours, several fext and graphics modes, twin built-in Microdrives, lots of interfaces, a seemingly excellent BASIC controlled by a Rolls-Royce of processors, an interesting shape and a big expansion programme.

And if's cheap. Or rather, for argument's sake, if's inexpensive. It really is a lot less than it should be.

The catch? there doesn's appear to be one. But perhaps everyone is looking in the wrong direction for the fatal error. If anything does eventually, or initially, go wrong if won't be the computer. Odds on it will be the company.

For too long we have let it all go by with computer companies: the production problems, recalls, apologies, re-delivery, the months of waiting. If our friend Sir Clive is reading I hope he bows his head in shame.

I'm ashamed to say that I have had two ZX81s and three of the 16 K RAM packs for it, finally giving up after the third packed up. This time round I've really done myself proud, nor stopping at three Spectrums. Oh no, I've had eight. No, this is not a typing error - I said eight. I wonder how many QLs I'I get.

Now, patience is one of my better virrues and I know that things like this must happen all the time. Buf it had better not happen again. I want to have faith in your company, Sir Clive, but you have let me down in the past. Your last chance will arrive soon when / order my QL. Be warned: there are others like me and it's a dangerous cutthroat market.

Please get it right.

## John Kilby <br> Luton

-This space is for yos to sound off sbout the micro scent, to present botoquets, to linul brickbate, or just to share your opinions or experiences. Contributhons fron tndividuals tarn a fee. Send your views to Pael Liptron, Editor, Home Compatian Weeldy, No. 1 Golden Square, Lomdon W1R 3AB

## NEW from the GODS



## AVAILABLE FROM ALL GOOD COMPUTER SIOCKISIS

[^1]SPECIAL OFFER Free Poster With Every Game

Silversoft is one of our longest established software houses - and its range of best-sellers proves it.
Now you have the chance to win a prize package of Silversoft games for your Spectrum or 2X81.
Each of our 84 winners will receive software worth about $\mathbf{\& 1 2}$. That's two cassettes for the Spectrom or three for the ZX81.

Your prizes will be selected from the Silversoft range by joint owners Dougje Bern and Andre Posumentov.

Ail you have to do is to find the Silversoft titles in our word square.
If you're a winner with either model of the Speetrum your prizes will be drawn from this list:

## Zorbiter <br> Muncher <br> Sippery Std <br> Exterminator <br> Misalon Impossible <br> Ground At ack Cyber-Rats Brata Damage Armageddor

And if you have the 48k Spectrum these titles could be yours too:
Sterahip Enterpritue Sam Spade Freez Bees

Robot Rioi
Winners with E EXA1 plus 16K RAM pack witl ench receive three of the following:

## Invader: <br> Muncher

Asteroids Allea Drepout

When the entries tre judged no distinction will be made between owners of either computer.
Entries close at first post on Friday April 6.

## How to enter

Examine the word square carefully and try to find all the Silversoft sofiware titles all of them, plas more, are in the twa lists from


Yoti may enter as many times as you wish provided each enury is on the officiat coupon and word square and is a separare envelope. lacomplete entries cannot be consideted.
Closing date is Friday April 6 at first posi.

The senders of the first 84 entrits opened it random, regardless of computer owned, wilf win the prizes.
The prizes will arrive from Silversoft within 28 days of the pablication of the issue containing the names of the winmers and the solution.

## The rules

The cloging diste it Trss post on Fridyy April 6, 1984 and the prizer will be allocated accordins to the How to enter section.

Enirier which do not follow the guidence givet cinnot be conssidered.

Entries will ant be accepted from employeen of Argui Specislist Publications, Slverooh and Almbuter Posintore e Som, This returiction also appliet to employees' 「ramilize and apents applet to employe
of the companies.
The editor's decision lo final and $n$ corrempondente will be entered into.
which moss of the prizes will be selected.
Mark the titles you find by ringing them with a balipoint pen or marking them with a semi-opague fell-tip pen.

Complete the coupan fully and clearly - if you are a winner is will be used as a label - and send the word square with the coupon to us.

You must mark on the bact of the envelope the number of software tilles you found.

Make sure you write both the model of your computer and its memary, includins RAM pack, on the coupon.

Please do not include anything else in the envelope.

## silversoft competition

## Entry Coupon

Nume
Address
post code
Number of titles found
Computer owned (Spectrum or ZX81, with memory):

| $Y$ | A | $E$ | P | $T$ | $V$ | Y | W | G | V | $N$ | $V$ | $Y$ | A | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E | X T | T | E | R | M | 1 | N | A | T | 0 | R | X | $Y$ | 1 |
| 8 | 90 | 0 | c | X | 0 | $B$ | J | $F$ | U | Y | T | Z | 2 | T |
| 2 | 05 | 5 | 1 | 1 | P | $P$ | E | $R$ | Y | 5 | 1 | D | W | 6 |
| A | X ${ }^{\text {P }}$ | H | D | C | B | 1 | D | 0 | N | W | 5 | P | 0 | A |
| W | B $\times$ | X | $E$ | $V$ | E | H | X | $B$ | $V$ | 早 | R | A | 2 | F |
| A | A 1 | L | 1 | E | N | D | R | 0 | $p$ | 0 | U | T | C | $\mathbf{X}$ |
| 5 | R 5 | 5 | $B$ | 1 | C | $V$ | C | T | 1 | $L$ | 0 | M | $F$ | N |
| $T$ | 20 | $\bigcirc$ | R | $B$ | 1 | T | $E$ | $\mathbf{R}$ | T | $P$ | $L$ | D | $R$ | R |
|  | $Y$ F | $F$ | H | T | 0 | K | E | I | N | $V$ | A | D | $E$ | R |
| R | 1 | 4 | 5 | $F$ | $\mathbf{R}$ | H | J | 0 | D | 0 | B | 0 | E | M |
| 0 | 2 | $J$ | 0 | $E$ | $C$ | C | K | T | 1 | N | N | I | 2 | $J$ |
| 1 | K | 1 | $F$ | N | 8 | K | J | $L$ | R | P | E | 0 | B | 0 |
| D | P | 8 | 4 | H | \$ | K | 1 | N | 1 | $F$ | $F$ | K | E | T |
|  | A | M | \$ | p | A | D | $E$ | E | M | 6 | 0 | 1 | E | $P$ |
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## VIC-20 PROGRAMS

## collect the rubbish... and sounds <br> Sound effects <br> Here are some special effects

Bugs
You take on the rolle of chief garbage collector for the central processing unit.

The object is to rid the CPU of all the rubbish while at the same time avoiding the "program pulses" that are scatered all around you.
Apart from the program pulses, you aiso have to watch out for the slippery floor because as soon as you tatart moving it is impossibie to stop, except by clinging to the walls of the CPU.

This game requires a joystick and runs on the unexpanded VIC-20

990 REM HCN VERSION HITH REMS
999 REM [CLR]
1090 PRINT" ${ }^{2}$ : POKE 36979,8
1005 REM [ORHJICRSR DOWHJL3*CRSR RICHTJ[VELJTGRU]

 T
1030 POKE36869.255
1035 REM [YEL]
 OR ${ }^{\text {B }}$ EHD
1050 FORC= $9432 T 07527$ RERDA POKEC, A HEXT
1055 REM [WHT](CRSR DOLHJ[2*CRSR RIGNTJICRSE DOHN]
1050 PRINT" wiNINSTRUCTIONS... UNNM ${ }^{n}$

1089 IFA "HET THEHI 3 O
1890 PRINT"TITHOU RRE CHIEF GARRAGE COLLECTOR...
1 O9S REM [CRSR DOHNJICHM
 1105 REM CCRSR DOH1J[YELJ (5*CRSR RICHT) (WWT)


1120 PRINT"MIIF IROU HIT FUHY FULSEMMORE THAN 5 TIMES.......MINSTRNT PROGRAM CRAS $H^{\prime \prime}$
1130 REM =--START----
1149 PRINT"PRESS FHY KEY TO PLAY"
1150 POKE 546 , INT (RMD (1) *)
1155 REM [CRSR UP)
1160 GETAK IFFSミ""THEHPRINT"J" 00 T01140
1165 REMECLR]
1170 SYS828:PRINT"コ"
1180 REM ---YARIABLES-

1200 S $1=36976: S 2=S 1+1=V=S 2+1: \mid=S C+252: \psi=0$
1210 SE=
1220 REM-SET-UP-SCREEN-

1640 POKEGA+C,3: POKEGA, 42 सEKT

1260 POKEBY $+\mathrm{C}, 1$ : POKEBY, 43 : FEXT
$1270 \mathrm{FORB}=\mathrm{SC}+44 \mathrm{TOSC}+65: \mathrm{POKEB}+\mathrm{C}, 5: \mathrm{FOKEB}+\mathrm{C}+440,5: \mathrm{FOKEB}, 40: \mathrm{POKEB}+440,40: \mathrm{NEXT}$
1280 FORB $=S C+66 T O S C+462 S T E P 22: P O K E B+C, 5: P O K E B+C+21,5: P O K E E, 40$ POK $E B+21,40$ VEXT 1290 POKEM, 32 FOKEV, 10
1295 REM[HOPIEJ[YEL]
 1310 GOSUE1480
1320 REM -..-LOUF-…
1336 FOKESI-2,FR
1340 PUKES $1,0 \quad C O=7 \quad C H=41 \quad$ R $=140$
1350 IFPEEK $(341)=$ OTHETM $=1$
136 IFPEEK ( 842 ) = बTHENY=2
1376 IFPEEK $(843)=$ GTHENY $Y$
1350 IFPEEK $(844)=6$ THENY $=4$

1398 OHYOUSUE $1530,1550,1570,1590$

 1426 IFRNTO ( 1 ). STHENCO $=5:$ CH $=44$ FR $=169$
143 ET OP = K POKEM $+\mathrm{C}, \mathrm{CO}:$ POKEM. CH
1449 GOT01329
1455 REM-CMECK-FCNTINE-

which you might care to use in your own programs.

We have put them all together into one demonstration program, which runs on the VIC-20 with 3K of extra RAM.
If you have a 16 K RAM pack, the following commands entered in direct mode immediately after power up will set up the VIC to RUN a program designed for a VIC or a ViC plus 3K:

## POKE8192,0:POKE44, NEW <br> POKE36866,150: POKE36869,240: POKE48,30

Clear the screen and you are almost ready to go, only one last hurdle remains. The program which you want to run may have a line like this in it:

POKE56,28;POKE52,28: CLR
This line is used to lower the top of memory to protect some area of RAM from being overwritten.

With a IGK RAM pack, if you used the above POKEs, you don't need to lower the top of memory -- so delete the line from the program. Otherwise you will get an OUT OF MEMORY error as soon as you try to RUN.

- Winning Games on the VIC 20, 55.95 , 4 published by Ellis Horwood and distributed by Joha Wiley \& Sons, of Chichester. A tape of all the programs in the book is $\mathbf{5 9 . 9 5}$ and book and iape together cost \&11.95.


## VIC－20 PROGRAMS

## $14^{75}$ PETURM，

1480 REM－－－－STORE－．
1496 IFCE MITHENHI＝CE


1510 FETUF\％
152 REM－WOMOVE－

1540 RETUFN

15，65 PETUE＊＊

158 RE TUFF

léag RETLRN
1619 REM－－ENTI－GAME－－
1620 FOKES1 6 POKES2 0

E Tk T


```
!F35 PEM[MEL J[CLP][CRCR DOLHJ[#&CF!P FICHT]
```







```
    i&-G Prive, & FutE
```




```
    [gS FEM[E.$'F~F FI, HT]
    169ET FEINT"MDPMDFFE IS A +Eq"
    16.S5 PEM[[ESR F]
```



```
90
```

1705 FEM [CLR]
1T10 CK=
1-20̆ FEM--MC-DATA----






PGO FEM- IHMP-DMTA--

1826 DATA $198,162,162,190164152 \ln 28$
18, 10 DATA248, 128,130,224,130,128.248, $138,1,36,138,250,138,138,138$ @ 0,0,0,124,
0000
18.40 DATACS5 $255255255255-55255255$
1850 DATAE客, 40 124, N. 124 413 636

187 DATA1 30 e8 $124.84184,631200$

| 1006 |  |
| :---: | :---: |
| 1010 | FPEM 米＊ |
| 1020 | PEM＊S엣N EFFECTS＊ |
| 1030 | FEM＊PROGFAFIS＊ |
| 164 | REM 类 |
| 1650 |  |
| 1860 | REPM－－－FHCITGW FTTACK |
| 1076 | FOKESEST， 5 |
| 1686 | FGFL $=1$ 1020 |
| 1096 |  |
| 1：60 | POKESESTE．F |
| 1110 | FOK E3EST7， |
| 1120 | NESTF |
| 1130 | FOKES687， 6 |
| 1140 | HENT |
| 1156 | FOREEEST， |
| 1168 | FOKE6GTB． |
| 1170 | CLP |
| 1180 |  |
| 1190 | Fullessigi 15 |

[^2]
## VIC－20 PROGRAMS

| 145 | ＋EST＂ |
| :---: | :---: |
| 141510 | FORES68\％， |
| 1420 | FOkE 36874 |
| 1436 | POREGOTS． |
| 1440 | ILE |
| 145 | 下E「イー－－－－－－－－3HF ILL |
| 1469 | $\beta=0$ |
| 1478 | $\mathrm{V}=15$ |
| 1480 | FDESESTG， |
| 1496 | $y=y^{2}-3^{5}$ |
| 1568 |  |
| 1516 |  |
| 1520 | $\mathrm{F}=\mathrm{F}+1$ |
| 1539 | IFH＝3THENT＝T－4 F＝6 |
| 1546 | FOkE SE76，T－14 |
| 1559 | FOKE S675，T |
| 15004 | －侙TT |
| 1576 |  |
| 1564 | FOKE36875， |
| 1596 | IFV2THEN143G |
| 1506 |  |
| 1616 | CLR |
| 16.26 | FEM－－－－－PED FHERT |
| 1636 | FOKEЗESTE， 15 |
| 1640 | FQFT $=1$ T ${ }^{\circ}$ |
| 1650 | FOKE 2676,242 |
| 1060t | Fじ心㇒＇6G75，161 |

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1676 FOkES6874，169
16GO FORL＝1TO100
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176 FUKE368\％日，あ
1710 FOKEKSTE， 6
1720 FOKES6874，0
1750 FDFL＝1TO1E区
174 W NEXTL
1750 NEKTT
1760 FOKE36878，6
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## 10．94 HENTL

1760 FONESERTE， 0
1716 FOKE36S75，6
1720 FOKESE874．0
17\％FOFL＝1TO160
1－4 HEXTL
1TSE1 IE

| 1760 | FOEESESTS， 6 |
| :---: | :---: |
| 1730 | CLP |
| 1－86 | REM－－－－HES 100FTER |
| 1－90 | F0， 26985 |
| 1506 | FIRT＝1T025 |
| ： 5 | FOr ESEST，－ 5 |
| \％ 5 c | FCKE－6874，134 |
| 1． 31 | F－FL＝1TJE |
| ： 34 |  |
| $\bigcirc$ | For Ereota |
| Steも | Ftr Ersor． |
| $\therefore$ ：-7 | －E＇，TT |
| $\therefore \mathrm{Cl}$ | F－1．ESECT，区 |
| d | F品E 5 |
| 12040 | CLF： |

－ 3 ： 1 FEM－－－－－－－FLAMGER
 $\therefore \quad \therefore \quad \mathrm{FT}=1 \mathrm{TOE}$




 1二男 For EEST THGDESERT4． －11G FLOEEEST 1


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Code


## Alrstrike 2 Atcirl $£ 9.95$

English Software，Bor 43，Man－ chester MI6 3AD

Alstrike 2 follows the usual Aurstrike pattern－that of a horizointally scrolled cavern filled with fuel dumps and nasties，through which the player navigute his Mark X fishter demolishing as much of the opposition as he can en route．
Although the Mark X is well－ armed with missiles and bombs， It has a lol to contend with． Enemy mines and massiles are plentiful；and with litmited fighter ordnance，fuel and mbintions dumps are essental targets for replenashnmen－board slipplies．
You are given the option when starting of pressing the＂ $\mathrm{T}^{\text {＂}}$ key for combined missile and bomb
discharge capability - other－ whe，the instructions say，the space bar must be pressed to felease your bomb－load．I found the program defautred to the ＂T＂option in any event

A one or two－player game， Airstrike 2 is a good example of its lund．The eraphucs are mociy decauled and well complemented by colour．If you haventu ared of the iden，Aursunte 2 shoutd sartsfy your appetite for couste 日 while．

## tnsiructions <br> ， <br> playabilıy <br> 350 <br> graphıcs <br> graphics vaue for money <br> $90 \%$ $80{ }^{\circ}$ <br> 明 0 若

T．A．

# Trail of destruction？ 

线 $=3-5$

Whether it＇s bombs，oil wells， nuclear reactors，or plain old sabotage，can you stop a disaster in this bunch of games？

## Reactor spectrum E7．95

Gemini．18a Liltieham Rd， Exmoulh，Devon EX8 2QG

Reactor has an alarming bug－ the first part of the program crashes on loading．However the next part will rum torrectly to reveal a challenging arcade－type game in which you have the daunting task of keeping－ nuclear reactor under control．

Power，radiation and the number of metals increase wher one of the neutront which bounce around the reactor collides with a metal，You can reduce radiation by knocking a metal so it huts the discharge uni and teaves the reactor

With less mexal it it easiog to control the reactor and keep the radialion down but the power level may be too luw to compiete the second stage
If you survive long enough you move onto the second srage where your control unit teaver ！ trail of coscrete blocks，used lor filling the reactor to trap the active metals．And so on
Reactor is an absorbing zame that shows few sagns of being a one－mintte worder．
instructions playability graphes value for monty

## 805 <br> $80 \%$ <br> 650 <br> 754

## 2 4 4 4

## Bombastic！ Englsh Sorme9．95 English Software，Box 43，Man chester M60 3 AD

 Thester M60 3AD gatme alihoush the itwo－player play ag＇in you the compuler can mean fula for your mone you a Both players money． missile players have moblic Within two verical fioned Etween these verical lines， matter bombs two bases anti－ blackness of cenpes out of the drifi at rindom then screen and target objectives they are the iranslucent，they int Al fursi as mussile shors take on colours withon The concusse absorbed Wif cause the devine to vimpact different difection to vere in a playtructions playabili！y colour reached．After several flare internmitens the bomb will Shodld it then boundary if will explouch a silo breach נn your explode creatms succerstive your defences，If with enough for $a$ detence gap is large against the adjacent to detonare over． So So the adeaz of the game is to ube musitle momper sand is to matier thming to drive spils－ opponent＇s ourer through your the JnmerNormally botion
each olber and bolns rebound off
but when erow missile solos off target a cructigh missiles hit on． arat a cruical stame will han


## Devastation \＆ sabotage TI－994म E4．99

Solid Software， 35 Melville Rd， Bispham，Blackpool FY29JF Devastation is mother version ol the popular bomber arcade game in which you have to destroy a cuy by dropping bombs on 4 ，in cory by to land your crippled order to land version，as weil areraft ln this veriand number of forward firmen mussiles and you also have the abillty to climb also have the abiny trouble．This should you get into urouble．himited
faciby can only be used a fachihy can only be used amer，as ambunt of thries，however，as there is a shortase ol at any one game may
of five skill levels，and in spite of is beng anather version of an old game I lousid it very entertan－ ing．

Sabotage，mgan，is a varianon on ant old theme．You bre on an with on fill field presented wiveral wells owned contannig several wells who th by a villaimous prolites who with holding the world to ranson with holding exorbitant prices Your gob is hus exorbitant prtes wells with to destroy the well musi be explosuves，but wach well musi blown up in numernci oroer hack you are not allowed to cross back over the fuse wire you have tad．
$G$ Graphics and colour are very good and the two games of Devastation and Sabotage Devethet it the price shown ere together at look at D．B． well worth a look at

80 m
mstructions $90 \%$ playabilty praphics 90 \％ graphics value for money

## Gusher

 CBM 84 £9．95Visions， 1 Felgate Mews，Stud－ land St，London W6 9JT

The btutb and instructions on the packagnog ilad led me to believe ihat this was an entirely ongmal geme．so it was quite a surpnse to find，on loading 1 t，that at is merely a compurer version of an old board game．Not that it＇s an exact copy－most of the featuret that made the board game worth playing have beed left out．
li＇s a game for iwo to four players．You have to produce oni， transport ut by lorry of pipehne to a refincry，and then export it by shup；the first person to reach the export target is the winnet The decision－makıag requared， and the opportunsties to
sabotage one＇s opponents，have been minimased no surcess is almost entirely a mater of luck．

The anap on whech the patre takes place is quite attractive，but this does little to compensate for the basic dutiness of the game In fact，it＇s 50 borng that 1 couldn＇t persuade anyone to play it with me．I did play ft right through once，yus in case there was an exciting win sequence at the end －there wasn＇s－but［ don＇t thimk I＇ll ever play ut agan M．N．
instructions playabiliy Braphess value for money


## SPECTRUM PROGRAM

1 PRINT AT 4．7：＂PRESE ANY KEY FDR＂！AT 6．7I＂A DAY AT THE RACES＂；AT 日，7；＂By A． 6 Bırd．1984．＊

2 pause ：
3 PAPER it CLE I PRINT AT 4：10：＂PLEASE MAIT＂
5 GD Su日 P0DO
10 PRKE 23a＠9，255：cl． 5
15 LET maneym20i LET Facemp


36 IF manev＝e THEN go To pqob
32 LET raceeracel
34 RANDOMIZE
38 IF ractso10 THEN GO TD 9950
40 LET C！＝iNT（RHD＊3
42 LET C2＝INT TRNDF3：
44 LET C3＝1NT TRND $\begin{gathered}3 \\ 3\end{gathered}$
50 IF E\＆\＃THEN LET E1m
52 1F c2mz THEN LET C2＝？

as LET Ead＝1NT（RND＊3）+4
bS IF Gad＝4 THEN LET Bd $=\boldsymbol{z}$

1 NEXT＋
75 PLOT 日，965 DFAW 36，36：DRAW 183，Et DRAW 36， 36

7日 PRINT AT 4，호 INK 1\％PAPER का＂A DAY at THE RACES
 NEXT
 $9,2 \mathrm{~B}_{1} \mathrm{adJJ}$

95 tF racan then PRINT AT 21，1iz FLASH 1！＂LAST RACE＂


128 PRINT AT 10，由1 OVER
150 LEET n＝［MT tRND＊？B？＋1


170 EO Eu日 $70 月 0$

 XT
IEd LET AE日E LET b－bt LET CEM






 255 IF בe＝

## SPECTRUM PROGRAM

## 

Fancy a day at the races? Try my program and startugs with $£ 20$, you could win thousends of pounds... or you may be walking home.
I have tried to create somethang "quite different from zapping aliens and escaping from mazes, both of which tn my opinion have been almost totally exhausted.
Anyway, this game is anonnolent and reatistic day out at the races
It has proved fatrly addective in my famuly.

All the instructions are m the program.

Note: captal leters in the PRINT atatements should, unless text. be entered in GRAPHICS mode

Vartabies
C1,C2,C3 horse colours
a,b,c horizontal position of horse
odd 1 , odd 2, odd 3 random odds

## money your maney

race face number up 60.9 cad saddle colow
bel which horse bet of
whe how much ssaked on horse

Zb5 BEEP - 1213.14
2TB PRINT AT is.
275 IF b=28 THEN GO TO toser


295 IF c=28 THEN 60 TO 1180


 Of NEEY O: BEEF $=5,26$
1918 IF betwl THEN LET mongympneytistaketistakpeodd 1\})
1020 PRINT AT 1, 2 Eimonay
1036 60 TO 25

g1 MEXT Q BEEP 5 . 15

1070 PRINT AT 1.2asmoney
1838 EOTD 25
 01 HEXT ot BeEP -5,10

1129 PRINT AT 1.2 . 1 +monsy
113960 TO 25

7019 LET ofdz=1NT (RNDE5)+2
7923 LET DAd3=INT (RND=5) 2
7922 IF oddl=6 THEN LET odal-7
7924 IF odd2=4 AND RND 3 . 5 THEN LET adazes

7939 PRINT AT 12,20: oddil: AT 15,26, odd2:AT 10, 26tood



7128 80 70718

-


$\stackrel{8}{71}$
7170 60 50 7140

72:B INPUT Etare


## SPECTRUM PROGRAM



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 LevelControl

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 INTERFACE- $\mathbf{1 9 . 9 5}$- Load+Save for Comm 64/

Vic 20 - Full Remore-Concrol


[^3]
## CETTHRS

## A question of copies

Paracy，Pùracy．．．how can we stop it？You＇ve probably heard this question a few tumes，but isn＇t the mosi sensible answer to reduce the price of the games？
Most good games cost froutd 86 with the best at around E12．How can you expect someone to pay such an amount for one game？

I go to a schtool where the computer density is very hath and so is the piracy of games．Bul why do people purchase that kind of soltware？

It must be possibie to self all these good cymes at present on the marex wath amalter price tag．After all，ft only costg the software houses aboul 60p to market one game．Ths excludes royalties and protils which then bring the price up to abouti 510 ．

Before 1 so l＇ll leave you who have coptes of tames with a question：If the price of a same was reduced， woutd you buy the copled version or the originat？
bamrendu Gingh，Eyed 12. juartford

## It＇s horses for courses

I would like to point out to Mr Mothews（Witl we spatak BASIC？HCW 51）that． alihough the rationalisution of compuler langutiges anio one standard language is in eskence is good idea，if ts in fact a totally impractical saggention．
No singte language－ espectadly the slow malerpreted BASIC－could possibly cater for the spectalist applacations required of it．

Every tanguage has its own good points and its own particular probiems． from the low－level but fast and very useful assembler to the most modern of the very high level artificial intelligence languages （Prolog，Lisp etc）and the hagh－level semi－compiled languager，like Pascal

Try writing effective and efficyent ariffictai mteligence programs in BASIC，of all languages？
Each also has its own specialisi applicanons in its own field of industry， commerce or whatever： Cobol for business and data processing Foritan for scientific and mathemalical problem solving．

Try wratung a Simpsion＇s Rule applicataon program if Cobol or，conversely，a data processing program tn Forlran

Obviously，each language has a certain amount of fiexibility．gut for each

> Send your letter to Letters， Home Computing Weekly，No． 1 Colden Square，London W1R 3AB．Don＇t forget to name your computer－the best letter could win $£ 5$－worth of software．Got a problem with your micro？We＇ll soon be starting a queries page，so send your technical questions to Oueries at the above address

application the most eflectuve and appropriate tanguage for that applt－ cation should be chosen
I woutd point out that the orpinal intended applt－ cation for GAStC was as a simple hagh level language for begmers to learnabout programming
This appicasion is now filled by yel mother language，better qualified to do this than BASIC Logo．

Even though BASIC is slowly moving away from IRS roots，it would the totally fnamptoprfate language to inflet upor professional programmers， especielly when BASIC inself has diversilied into 50 many dialects spread over such a wide range of incompnitle machumes
Most other lanquages ate far eloser between machınes than BASIC．
G．R．G． $\mathrm{Cl}_{\mathrm{Ith}}$ Artroath． Atrges

## Magazines must eet oyer pirtey

Computer gnmes soltware sthe dynamue succest story of the current economic mफeeston and in an ares where，for a change，Artatn has tangoble lead over compering counistes．

The Eames foftwart modustry is a part of the emerging letsure technology andustry and our lead isi games will be reflected in other areats of technology as they emerge，given 日 chanct．

The boom in sames sofiware has created jobs， not only directly but in prining．duplcasing． advertising and in the matgazine industry．As lesure technology progresses it could become a major source of employ＊ ment．
All thas is beang jeopardised by the selfish activities of members of the public who alte copying games instead of buying them．Thus is theft，We are not talking about isolated

Irstances，we are talking aboul＂＊user groups＇ rumning mini production lires at thetr evering meeungs and stealing as many as 2,000 coples of successful individual tultes at one go．
Conservatuve estimales regard seven copies for each leguthmale product as benns a realisuc overall preture of the marketplace
This is risking the luels－ hoods of everyone in the industry，including the magazines．The games compames have far less to spend on advertusing space and if the epidemic continues will have less 3t．ll． This is the reality of the ntuation
The media is a powerrul force yet in this instance is dotng lutte or nothing to use this power．Some magazines even carry emall advertisements for blalant copies．Some mbagaztes have actually emried editertaj condoning the theves．They arecuting off their gosees to gite their faces
The sime has come for all compuler magazines to （0）］ campaist to stop pracy． Edstorial must campaign for faw changes creating tarster penalties，The copyln clubs must be exposed，Adverifising execulves must filter obl the pirates＂adveris，Piracy msst become unpopular，
If is ho good expecing the softwafe companass 10 solve the prob，em，they have not the orghnishlion or power－it it the media that has，Any magatine thal does nol act is nol facing up to reality
bavid Lawson，Murk Buller，Brute Fweris⿻弓⿰丿丨贝刂，Inn Hetheringion，Alectors， Imugine Soltware，Llver． paol

## New record

I amt writing with reference （a Stephen Gutcher＇s letter HCW 49）about Micto－ drive order forms
I have to take over hus world reedrd due to the fact that I have now recelved ceght forms．
J．Mckellor Man，Reiford， Nots

## Beaten him？

l＇za wrilang to see if anyone has gol 100 per cent on the spectrum version of The Hobbil．My highest score is 92.5 per cent and if anyone has managed to get better han iny score coutd thes mform HCW
Phil Hoyle，Rhiendahlen Germany

## ORIC PROCRAMS

## Hubeor Rince

Your challenge in this game is to survive whale bombing rargets．

The game screen is splat into two sections：the top half has meteors to avold and the battom has a landscape．
Your ship will appear in the centre of the screen and then the sereen will scroll from right to left，achreved by using constantly updated strings．＇
The landscape section has targets to bomb and to survive you must keep hitting the pods， which increase your power by at least 51 unuts．

The missites score points only．You lose units of power for each shot，so don＇t be too trigger happy！

Before starting you will be asked to choose a difficulty level and this controls your power consumption．
You＇ve last if you ran out of power or crash

You score 10 points for hitting a pod and 15 points for each missile．
The controls are：

## X up

## down grrow down

up arrow up

## Variablew

PC\％power consumpion level PW\％power level
Un艮 verticel position of space－ craf：
As landscape string（not up－ daled
Cf－MS landsenpe ind meteor string varsables
LS，RIS vanebles used in up－ dafint string variables
SN boop coumler－used when removing hit objects
PX，KS keyboard values SC\％your score
H1 high scoure

## Listing for Metenr Race

## ［6 RET

2 Fix．M BY A．P．GORDNER
30 PRINTCMRET17）；CHRT（ 6 ）ILORE 59
筑

47 REM CHGDSE DIFICULTY
50 cls

65 PRINTI INFUT＂ 7 EEENG HARDEST＂；PC\％
76 IFPCZ 1 1THENPLZ 1

日 B PCZ－PCX＋3
67 CL 5
50．B05481290
4T REM SET VARIABLEE
109 PWK＝5BET：UDK＝7
128 MAITINO

17 F FORN－22TO17STEP－」
18：PL．DT1，N，A
198 NEXTN

cs foecc



238 1ダーシ
scece 0 freq gecect o e

240 15－＂
$c$
250 kF＝＂a
2billaw d $d$ $a^{0}$ $d$ $a^{d}$ ：
270 MEF HATN LOOP
RGB FORC＝1 TOB





510 PLD714，40x＊＂4b＂
YOS PLOT16，17，＂
र的 LLOTE，



 478 It－R1






## ORIC PROGRAMS



## SWarte

You＇re pitted agatnst the computer in a battle of skill

You and the computer stant at opposite sides of the screen， moving towards each other． Both of you leave a wall behind you，and your wall is sold．
You must avold the wails and smalier obstacles and not leave the game boundary．
The loser is the first to crash five times．
You control your direction with the cursor keys．

## How it works

t0 swirches off key－clek／cursor and sels screen colouss
60－130 scan keyboard，make adjusiments，check for colls－ on，PLOT player＇s square
140－190 日djust computer＂s posi－ ton，PLOTs square，checks for an obstacle
200－250 changel computer＇s direcuon，checks for collision $260-320$ crash roulines for you and computer
400－470 PRENT \}alest scores
500－560 game over，PRINT who won，watt for key－press
5000－5040 automatically adjus posiltor of you and compuler
$7000-7150$ sel somse variables， PLOT screen
$\mathbf{8 0 0} 0-8070$ set othef variables and select skisl level
9000－9110 tet up user－defined graphics

## Varlablea

Y your total score
O compuler＇s total score
SL $\mathbf{s k}$ ill level values
P／KS keyboard values
Ho（N），VhiN）horizontal，ver＊ tical posiluns of computer and you
DW（N）direction of computer and you
N conirols arrays $\mathrm{H}_{\%}, \mathrm{~V} \%$ and $D \%$

## Listing for Swerve

20 REM BY A．P．GARDNER

49 Basubrmed
50 ensurseace
III 11
57 REM MAIN LOOP
bal PAPEEK（526） AH －
7a IFP＝172TFEND $\{N\}=1$ Bg JFP＝189THENDX $(\mathrm{N})=2$
90 IFP＝1E日THENDY $(N)=3$
IE IFP＝156TMENDXINI＝
「TH


$140 \mathrm{~N}=1$

178 PL．athr $(N), V x(N), D^{-}$

19 GOTDS
197 REM ADJUST COMPUTER 日 DIRECTION



223 IFOX（N）＜ 1 THENDK（N）$=4$
226 IFDX $(N)$ ） 4 THENDX $(N)=1$
23 BCSLIREABO
248 JFSCRN（HX（N），（NX（N））＝32THEN17

243 IFDX（N）＝3THEMDX（N）＝1tGOTO247
244 IF DX $(N)=4$ THENDX $(N)=2 \mathrm{E}$（GOTO247
$245 \mathrm{DX}(\mathrm{N})=\mathrm{DX}(\mathrm{N})+\mathrm{Z}$
247 gostbsep
250 JFSCAN（HX（N），WX（N））$=52$ THEN1 70
255 REM CONFUTER CRASH
10－
27－FGTN＝7TOABTEP－LIPAPERN：MA1 TZEINEXTN
296 $\mathrm{V}=\mathrm{\gamma}+\mathrm{L}$
295 REM YOU CRAEH
YMo EXPLODE
380 EXPLODE

39：REM BHOW d．ATEST BCDMES
406 WA：T180
416 CLS

43 IFO－STNENSEO
449 PRINTIPR1NTIPRIATSPCII！＂SCORES SO FAR＊

460 Wa！T300
1葠 ©
490 REH GAME OVER
 51R PRINT：PRINTIPRINTSPC（13）$=$ YDU WIN＊


 54．



## Hents on conversion

These games could be farly easily converted to mosi computers with Microsoft BASIC POKF and CHRS state－ ments can be removed

PAPER，INK cpontrol back ground，foreground colours
WAl＇creates a pause for a specified number of milli． second5
PLOT $x, y$ is equivalent to PRINT（6）$x$ is the horzonal posston and $y$ the vertical PLOTing a number sets 日 colour attribute
KFY＇s scans the keyboard
KCRN（ $\mathrm{x}, \mathrm{y}$ ），（erecm PEEX） returns the ASCll value for the position given
Ci．S clears the screen
PLAY creates sound and can be deleted or replaced
SHOGT，EXPLOHL and PING are Oric sound commands
SPC can be replaced by IAB or semoved

## ORIC PROGRAMS

## 4958 REM ADJUSTHENTS TO DERECTIOM



3020 JFDZ $(N)=3 T H E N H X(N)=+1 Z(N)+1$
50.30 IFDK $(N)=4 T H E M N Z(N)=V X(N)-1$

Sa4g RETURN
6990 REM BCREEN



70.30 FDRM＝17025

7946 PLOT1， $\mathrm{N}_{4}{ }^{\mathrm{n}} \mathrm{i}^{2}$
7050 NEXTN
 7970 FORN－1TOSL
7608 A＝［NT（RND（1）$=36$ ）+2
749月 日

711 PLDTA，B，＂ロ＂
7120 NEXTNIJNK 3
7130 RETURN


0910
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$\square$ DATAल， $63, \mathrm{E}, \mathrm{C}, \mathrm{\theta}, 0,0,0$

## 1．kill Varlable <br> SL skill level value

AS，BS belt strings
LV年 number of remantag lives
L．W5 LS Hrengs to desplay lives （C＇m score
HI high tcore
LD＊vertical position of person KS leyboard value W．WAIT value －controds speed Cs stores belt edges

## Conveyor Belt

As an errand person you always get the worst and most dangerous jobs．

The evil wizard has given you a message to take to the manager of the mines．To do this you must cross two lines of conveyor belts which carry lumps of ore．

You must leap from beli to belt whthout htteng the ore－if you do you＇re knocked into the machine workugs and that can be panful．

The wizard has also cast a spell wheh makes you start agaun after you＇ve crossed

Luckily，you have three lives and you can adjust the level of difficulty．

You move forward by press－ ing any key and gaun five pornts for every line of belts crossed．

## Listing for Conveyor Beh

29 RETH BY A．P．GARDNE：R

3 PAPEREIJNK
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9829 DATA31，17， $31,4,31,4,10,17$


ME5 DATAB， $0,4,12,12,5,0,6$



1 Manc Miner
2 Buga Boo (The Fles)
Chinese Juggier
Mi Wimpy Magawarz Hobbrt 64 Hungry Horace Falcon Patrol

Software
Projects (2)
Quicksitva (3)
Oceen (1)
ocean (5)
Paramount (6)
M. House :-1

M House (10)
Virgin (8)
Llemasoft i-1

Hover Bower Hunchback

Ocesen (-)
Compiled by Websters. Figures in brackets are last weak's positions

Top Ten programs for the Dragon 32

|  | Hungry Horace | Mel House (1) Sotek (4) |
| :---: | :---: | :---: |
|  | UGMI | Peaksoft 1-1 |
| 3 | SAS | Microdeal (10) |
| 4 | Skramble |  |
| 5 | Space Shuttie Simulator | Microdeal (-) <br> Beyand (6) |
| 6 | Up Peribcope | Microdeal (7) |
| 7 | Dovil Absalit | Microdeal (2) |
| 8 | Eight Ball | Microdsal (-) |
| 9 | The King | Shepherd |
| 10 | Transylvenian Towar | $(-)$ |

## Top Ten programs for the VIC-20

| 1 | Computer Wars | Thorn EMI (1) |
| :---: | :---: | :---: |
| 2 | Wizard and the Princess | M. Hensea (3) |
| 3 | Crazy Kong | Intercepto (-) |
| 4 | Bewntched | imagina ( - ) |
| 5 | Paratroopar | Pabbre (6) |
| 6 | Gridrunner | Liamasoft (8) |
| 7 | M.L.B.A.T.E.T. | Hamasoft (2) |
| 8 | Arcadia | Imagine (6) |
| 9 | Wacky Walters | Imagine (9) |
| 10 | Jet Pac | Uthmite (10) |

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Top Ten programs for the ZXIT

1 Flight Simulation
2 Chess iK
3 Football Manager
Invaders
Defendert
Fantesy Garnes
Chess Krazy Kong Hopper ZXD.B. Sabotage

Sinclair (t) Sinciair (-) Addictive (5) Quicksilve (3) Ouicksiva (2) Sinclair (-) Sinctair (-) PSS (4) PSS (6) Bug-Bytel-1 Sinctair (-1

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last week's positions


## WELAREYOUTO PLAY WNHTHE FUTURE <br> 1994 6.95

(10 YEARS AFTET)
ZX SPECTRUM VS 0748

## Captain <br> Sticky's Gold Athri E9.95

Englush Software, Box 43, Man. chester M16 3 AD Cagtain Sticky loves chewing gum Trauble is it fosts mancy That's where you come in - of should i say go under.
The Capran finances his supply of gum by stealmeg gold from in seabed mine. As his lesesi crew member you will joystick yourself down ko the mine and send the sold back topside automatcady, by attachnge a shap's hauser to the land you make your own way back to the shap for a ref+l of air.
No, It isn't as casy es that Thare is a lumated air supply, Harmful sea-creatures lork in the deptha. A helicopter occantonally fles overhead dropping depth charges. There are even seabed
massile launchars to caier for Yout idarpoon gin will be found ksefill although ifourd it ots slow on the draw. The graplues in Capaan Sticks are very good modeed. Such is the denail, the sky darkens whet clouds obscure the sun above the sea. There are five liver avalable for the one or two players, and many skill tevels to chose from
If arcale gamts are your fone you will enjoy Capran Stıcky. If not, you could find the game soon hecomtary repellawe. Needs joystick.
T.A.
instructions
75 勿
playability
$8 \%$
graphecs
950

## 5.3x $\cdot \frac{1}{4} \cdot \frac{3}{x}$

General knowledge to outer spuce

## Something for everyone in this mixed bag of programs

## Centimunch 480 spectrum 25.95

TNT, Me,ton House, $\ddagger$ medal, Liversion, Cumbria

A pather superior worm garne. The food is disiribuled in a 30 maze; the more you ent, the longer yats becomse and the horder If estaf Eal the random bess and acquire a higher score, but avoid the stinging spider. Consume all the food on otte level to gain access to the gate which leads to the nexi month's garcten which ts more complek.

Al. the features we have come to know and love gre here, High Scort, Hall of Fame, and sound effects, togecher with a demo mode
This graphes bre of a super standard, well up to that of the
arcade,and once the bug bices, you will be well and trouly infected wath the enthusasm A number of 3 kill levels are avatable from begminer to daredevis I have to admil I had to contentrate reajly hard we reach the thied page using the carsor keys. The program doesn'I clam to be joystick compatible, but it ought to be for really ligh scores
Just one point of agrevation' Of the few words to appear on the screcn, one is mas-spelited and this realty looks bad. Please use a dictionary, progrmmers! B.M

Instructions
95\%
piayabulty
$85 \%$
graplics
9803
valat for money $100 \%$

## 

## Areturus 48K Spectrum E 6.95

## isions, 1 Selgate Mews

 land Street, London W6 This game consisfes of attempring to gel four crosses in a row puis $x$. plane As the may y man, man v you can play man computer v computer, These are plenty of computer. These the on the frimy trastuctions, on the screen, but an card and on choice of papes and mak makes for hard work reading the screen sel. As \& prelisulnary therc are over 20 sereens of rules therc are over and explanarions. Once you have got travigh the masn deferices. and into the game proper, the first thing you must do bs gye your neme. Afier that a bowldering array of options are open to you, skill ievel, secondsper move, or minutes per gatne and 80 on. One of the more uscitul optuons is the ebslity to usern off the sound. If ath thes surn off the sound. ands anothong though amock sounds as though I am kame is the game tim not. The game is Tic-fac-foe whaterer embellishments this proticular authot has chosen to ind.
lf you like this sort of eame then this is the best version 1 have $\operatorname{sen} 50$ far.

malue for monsy

## Quizmaster - <br> Sports and Cames 4aK Oric Es. 95

R \& $\mathbf{R}, 34$ Bawton Rd, Tuffley, Gloucesier GL4 01 E

Quirmaster is a test of both your gencral knowledge and specialist sports knowledge. You select which subject you prefer it the starl and questions afe then posed for you, logethe with 4 possible answers. If you choose correctly your score is increased but if you cre wrong then the answer is revenied and you move on to the next question
I reckon there are about 120 quethons theach category and the degree of dificulty is such that most inembers of s famuly have a chance of petung the nght snswer. Of course 4 options
duplayed mitats you might only be guessing — but who knows? 1 experienced few latte quirks on loading, but thus seems not uncommon with very long BASIC programs such as thes.
In any program of this nature there is twwas \& question mark over its lasting value but provided the questions are generated in a random fashion then there are enough here to kap you occupled for some enjoyable hours.
P.S.W.
ustruthons
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playabilisy
praphes
70 \%
value for maney
$75 \%$

## 

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## COMMODORE 64 SOFTWARE REVIEWS

# Adventure and action <br> <br> Bemand <br> <br> Bemand Dramel Dramel E9.95 

 E9.95} for the CBM 69

## From bugs to giants, our reviewers put a selection of the latest games programs through their paces

## Hideous 1 BIII and The ci-gants $\varepsilon 7.95$

Firgits, $61-63$ Portobello Rd, andon WII 3DD

A Pacmantype pame, but much more entertainalg. There are three levels. On the first you diash around the maze stamping ont ant around the persued by giant ants. You can collect three spearl withon the mate which will defend yor for a homuled time If you clear for sereen you lind yoursell on the next level. This time you have no defences but you can collect a lever that opens or closes atrap door When you clear this maze you have to hop behind the trap door yourself to collect acen of
strengtheming beans that lake you to the third level where you mett the herouns, Greta, who 15 trapped

This bame bas been very well designed. The intituctions on the cardiare clear, but you niso get screen of mstrutions before each level

I enjoyed playng thas game The speed was thet impossably fast, yed with only three lives it rectulired some skill to sen to the required son til in ati to the third levet. All in all. E well thought out and presented packiage

## instructions <br> playabuny <br> plasabins graphics

yalue for money

Vistons, I Selgate Mewis, Siud land Sirees. London W6 Have you ever fancised rumnang your own country? Well. here's your own country whe added advantage that if you mahe a press of it and end up being overihrown in a revolution, you overihrown in a rever clockik and can just wind back the. Actually, belig overthrown seems to be mevilable in this particular inevirabio. The challenge is just smulation. The chailane survive to see how hong you can survine and how much morkey you can sall away in your swiss bivenk account before disasier strikes. Thus is a game rather than an autherstc simulation: the
scenario doesn't bear much resemblence to reality, and not do the decisions you are asked to make. Your options at each stage make disturcly limuted, and there are distinctly lumuled, to change are no ond

There are some graphics and ther repertive sound effects to rather reperne procedings, but 1
enliven the enliven the game very didn I find the ga seiections entertanuing. Making seemingly endess from a seemingly endess succession of menus, hayever tassefully decoraled thay may be.
really doesn't offer much in the really doesn't offer much manal way of excilemen or M.N. sumulation
instructions
playability
graphics
$60 \%$ $50 \%$ $50 \%$ 40 H

## value for modey

 There about play somethring very odd compurer if board gathes odd in en comipumay be userul to opponent, absice of play gitanst case, the comp when, as human inself but mputer does it this game, the wherely supervisu piay This ponties: exercise serthe This verstess
presented, with is quite On, cmap of the colourfur well Whether you control sorid to play a foystick, use the kerb orliky, game is easy but ortherworise or
bigest biggest shag, though to play, The accomplow Each arsthat it is

## - by a flashing

## Boggthiog (The Fiect

Quickslwa, 13 Palmersion Rd, Southamptor SOI ILL
The msirsections that come with the cassete were rather sparse and 1 did not know what to expect wher the game was loaded However, the wat boaced the loading tume was well during the foading thas gante very
worth it 1 found thus worntictive and enjoyable.
The seting is a very large the semtamas all sorts of cavern contammag hous the flea, stant off at the bottom and have to jump from one ledge to have to jump fork youtr way to the another the work your wherge that sop. The cavern is so you cau only see a pontion lefi and screen bul you can scrot ledges. nght to look for fumpung around While you sre yompha flying
dragon that persues you, You
also have to be careful that you also have ta be carefur fall into. don't jutup inio,
The graphics are brilliant and The graphles are brimans and in this tantasy land the colour Throughout the rich it colour calchy tunt is pamt a very tachy find it played. but if you tind the distractimp you can swich to be muscic Altugether a games to be mighly recormended. ever if. does need joysnicks

\section*{insiructions <br> $70^{\circ \%}$ <br> playability <br> praphics

## $80 \%$

## $80 \%$

DENIS THROUGH THE DRINKING GLASS FOR 48K SPECTRUM

1. Are they long enough?
2. What is number 36 ?
3. Who spoiled the photos?
4. Is there really such a pub in Plymouth?
5. What made Woy dizzy?

6 . Is he a quarter pounder?
7. A hole in one or one in a hole?
8. Where did he learn to talk like that?
9. Has he gone off his Malvinas?
10. Who is it dummy?

Score 10 - You wrote it. 1 - 5 You've played it 0 - To get your copy of Denis Through the Drinking Glass send $£ 5.50$ to:
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## Classic or original, arcade-type or adventure, our reviewers give the once-over to a new batch of games

## Pasta Blasta 48K Oric

Arendia, Freepest, Swantsea 5A3 $42 L$
Fancy a Ifuly outrageous sheol out in an Italum res, atirant" If you do make sure yau wear wour old thert bechase your siate squirter will be workilg overume Robbers are shing to stenl your raviou tint and you sten gour rovion and their Pac
 industry.
Thensity. game is compatible with the $\mathrm{F}^{3} \mathrm{AS} E$ joyslick bity keyboard conifol is ulso quice strughtitionsard Very gomd use of sound and colour combine 10 make the effect quite ppecaculan,

fame is very mocely done, with many entries poswhie Areadra says this is part of a trogey If the next two live up to this mandard then the fun should be manntaned ai a high puch. Apart from what 1 believe ss an rognal idea Arcadra has put mueher an uddictive progtam loyelher an uppeal to just abust that yulappliver From sump.e fun to cut - throat comperition. Pula Ei, asta sheuld I! yous needs, if not your stoma.h, quile needs. th nor your pos. m . meely
$904 \%$
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$90 \%$
$90 \%$ insuructions playabituy
graplis

## 

## waydor 48K Oric £7.50

[M5, 147.145 Uxbndge Rd, London 413 9AY
Another advenare game, but different from most ohers presently vatable in that in presetudes phenty of illustrations. thelude perty ocation, and 5 have In fact every locanon, dozen, is found at least two dozen, is thustrated colourfully these Oric's meres display thever you appear instantly wheneve you enter a grew place, nol highly representative artistic

It is sch in and around a caste Enough clues are presented to allow yous to solve the broblems and collect the Ireasures equired I suspect that a eequired
eompiete solution 15 probably
not too disficull but since द have no complesed it yel I mught be deluding mysell.
The adsenture is writen The adventione code which provides the fast and memory guing method needed to allow weh liberal use of graphes it also makes at mach harder to cheat.
You enther love of hate sdventures. and a lot of the success of a game depends on the widin of tis yocabulary, Waydor uses a reasonably large collection of wordis, but you may have to try quise : few combinations before achteving your amm. Ths gin be frnstraturg, but persevere

|  | $65 \%$ |
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| ptayablay | $90 \% \%$ |
| graphes | $90 \%$ |
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##  <br> horige tics, Itrfehome, Haw hamplon 4 , odsall,

${ }^{\text {Io }}$ do the same
Fate ahead ands Ohe you, and or hace the and then sl mioy is 10 thes is not cas your opinow down, is a ita cass to mumbenr, bur the fater but cempliceter Sorbut

## The Laughing Shark wants



## forVirgin Games

## EDUCATIONAL SOFTWARE REVIEWS

## Vocabulary VIC-20 +8 K , 16K E9.99

Commodore, 675 Ajax Avenue Slough, Berks

If during my teaching practice, while trainng or any time I have been teaching since I had produced visual aids for try classrom of the same standard as these programs It would have fa.led insiantly. The sel consusts of two tapes, and instruction bookk and a range of topics. On the first tepe the progranis cover everyday objects, the parts of the body, types of buidning etc

A labelled picture is shown to the chald and he or she is asked to look and team the spelings. After this, one word al a lume is removed and the child is asked to re-insert 1 l . A tone tells you if the
speiluig ts correct. At the end of each group a score is given along with a revispor lisk. The aum is to therease the chitd's vocabulary, improve spelting and increase confidence in reading
While the ided is good, the overall quality of the program is rather cheap and nasty. The graphses were crude and poorly presented. A comperent programmer would have developed fugh resolution ploting reurines to rave a wide range of qualisy graphics. Rather tatty, compored to the matenal available on other machises.
Part of the Teach and Test
Series for ages five so enghi. M. W
instructions
ease of us
display
value for money
ralue for mone

# Lecuning with your computer 

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## Xngerams 48K spectrum E6.95

Postern, PO Box 2, Andovers Ford, Chelematn GL.s4 \$SW

Following prompts, you can work on up to five words at a time, making real wordi out of jumbled letters The hadden word is dispmayed as blue blanks, with the jumbled fetters on the right Muluple wards display in cross word format. You cursor tuross the blanks, pressing your choice of tetter. Correct scoses 30 . wrong loses five and there in a hugh-score display. The three levelk are junior sckool, semior, display is unadorned, with bule visual reward for success
Sham.cssly, I chase one word
at jultior level and falied
miserably with $\pm$ six leter wora (ROC KET). Hastily comitnuing, I scored instant success with JAM. Racing through several similas minar achievements, J boldy troed three words at once This now becones pure guesswork is all leters of all words are jumbled logether
My interen waned quickily and 1 doubt the educational merit. Is a chutd, at the kevel of recognising JAM, capable of undersunding the anagram idea? The sungle word has some merit but multiplay, peeding fuck and the crossword mind. may be beyond many. Children wish word difficulty mught be turned off forever.
instructions
ease of use
display
value for money

## Nine Currant

 H8k BurnsSpectrum
E9.95 Five Ways Software, Arrow
1721 6JD Conway $\mathrm{St}_{2}$ London Wir

Andertertainulg way for the wit to sixes to pearrithe numbers to no nithe, practice counting uns to nime, and be conroulting up progran and tutbes a bytaction. The withe box of a binuler in a shop infec ghngerbread med buns and The numbers afd then to lo feach reinforemere is pletrity the reanforceming of allethy of that is coseofions
Addution is taught usimg display
animated phus sigut and vering in display


## French

## Oric $£ 12.95$

Tansoff, $1 / 2$ Cambndge TechnoPark, Newmarkef Rd, Cambride
If you fancy some Fremith lessons then Tansolt provide an aulractue method-lesson course, your meeding about one hour of concentralion, is provided in the fomm of a program and an audio lape The idea is to run throus the lested for each way translat.ons, and then haten to the budio tape for the pronunctations.

By the end you shersid have accumulated a voxabulary of nbout 340 words anamas Thas tris in baste Brammas for for shoud provipur knowiedge
exiendirs your kilhod used is the The method

Gruneberg Latkword Language Systetn - technuque of linking French worts to sin imitage for ease of recall. Some of the examples are bazarre but this is quite deliberate, to ereale interesting umages

It is obviously impossible 10 Exuss in a lumued period, tind it would depend a lot on the commatment of the ures The course should appeal to chuldren and adults equally gnd cotld be useful before the holudays Tectanicully the package functioned well: the sudio Iape was particularly cleat end profersional

## instructipns ease of use

display
vilue for money

## Arithmetic 2 YIC-20 + 8K, 1625 59.90

## Commodore, 675 Ajar Avenue.

 Slough, BerksOne tape consists of two programs, the first teachtng the numbers to 20 by placins a number on the screen. The chald, aged five to eight, has to use the keyboard to copy the number. If the mimber is correct, the machme shows the corresponding number of cars on the screen The second program lests what hats been learned by putting randorn numbers of objects on the screte for countans, After basic counting the machine deals with counsung th twos, thress and fours using mather uninspured graphes.

On the second tape, programs
animals showing how many are adding aded Then pracrece in A snake replaces the an overiny. foln in the demen stituraction rake away and fuatration of practices session luads to the Eath activn
planned, with boty beon wall the sound th epod use made or bilary of the sind graphemes capar and parent wourtum Ihe capabest emprioyed woud, obvousty, that thoromghiy ed using an act be hot race throulthe session and because they then them ail and much at one time loaded joo and not educate. would conftuse $\begin{array}{ll}\text { display } & 100 \%\end{array}$ HoOW
thome
thres and four deal with mulupltcation and division. The test paris of these programs are In the form of games (Eal the Cake, Carch the Kıre). My daughter, who hus diffetury whth numbers, asked when she wouk be dating maluplication after playing Catch the Kite - this must be an advantage in any afithmetic programme. That diviston program has the same format
Overall a useful but umanspured package. Fart of the Teach and Test Senes.
mstructions Ease of use display
value for money
 4.


## TL-994A EOFTWAFE REVIEWG

## Nause of <br> Horrors tinl star Strike E5.99

Soad Soltware, 35 Melvile Rd Buspham, Blackpool FY2 9JF

House of Horrors 18 an adventure game with graphics To stany you must find the key to enter the bowse Clues to the key are guven on screen and once dectphered you are given an option of five levels of play and a charce to have the instructions displayed if required, Withous warming you are beset by problents which must be solved before you can proceed, There is an egotisucal gorilia who likes to hear hus name, and this $t 5$ printed on screen for a brief moment after which you must type in the name from memory, The parme
proved to be difficalt enough al level one so if you get to level five you're a better man than I Gunga Din. This gamse is excellent fitn and a must for all you adventure fanatics.
Siar Sitrike is an arcade style game where yout are the pitho of a spaceship defendıng against alien invaders. The graphtes used ase excellent and represemt the view throush a cockple window at the aliens coming towards you in a good 3D effect. Although the action is limuled, the gane is well presented with excellent graphics. The whole package adids up to a very good vilue for money.
D.B.
instructions
$80 \%$ playabilisy 955 graphiss
$95 \%$ value for money $\quad 950^{\circ}$

## $5-2+0 \cdot 4-2$

 <br> \section*{Fun, games <br> \section*{Fun, games and utilities and utilities for the for the Texas Texas <br> Play golf and cards, have adventures and hit the aliens - even design your own graphics with these Texas mrograms}
## Thel calf 17.50

Sorti, 14 Stalon Rd, Brough. Norih Humbersde

The game of zolf is now avalablic for most micros and the TI is no exception, wilh several versions on the matkel
Unfortuntalely, moss of the reulism is taken out of ths program, with non-standard clubs used when to would have been just as easy to use a slandard sel
Instead of the usual three woods. nime irons and a putter, only 10 clubs are used. These are as follows: seven arons. one driver, one rathee old-fashoned brasste and one wedge

The course has in ne holes, and any hoe can be played at any trme. I was surprised to find that there wete no lakes, streams or

1rees whech are armost ensential features of a real course Rather a strange aspect of the game was that the computer chooses "sultable" club if you land in the rough. This turns ous to be exiremely annoying, as aine umes out of ten you have to play away from the green in order to avoid poing into the rough again

After the sunth hole. your score card and handicap are displayed
This is not the best version of golf I have seen, but it could be areally umproved with just a few
minor additions.
15
tnstructions
704
playability
graphics
value for money
tot $\boldsymbol{t}$

## Graphiles Crentor 8 Screen Editor $\varepsilon 5.95$

PiKaDee, 35 Parket St, Preston, Lancs PR2 2AH
Gone are the days when l used to spend many a bortng evening scribbing on a groty pace of over-used graph paper. of over-used design yet another
attemping to alien for the worlos version of Space Invaders. Aht have to do now is load Graphics Creator, and alter tapping in my cequarements all the hexadecimal requirements alt hed out for me coding 15 worke
Very convenuent
As well as Graphics (reator and Screen Edior there are three and Screen Ednoms contanting other program
character sels, but 1 found these rather hard to load

Upon execulton of the program, an 8 a 8 charecter grad distayed on the Eereen, togener with the letiers $A$ with erneath them, 1wo pows of un-defined characters
To design your own character. bill you have to do is lap an the nil you thies of the solyares you coordinates of the squires you need Filling. Characters can be rotated, inverted, stored as one as the user-defimed characters. and saved on cassette. Therr hex and saved on cassette. Their hex lustings can also be shown on the screen.
The screen edinor allows you to desigi a screen using your predefined characters, which is very detined when planning tute screen for a program. A must for all Tl owners. J.5. instruchons

100 F imstructuons 95\% ease of use ${ }^{95 \%}$ display value for money

## Fun pace E6.95

Virgin, 61-63, Portobello Rd, London W1I 3DD

A package consistang of three games, one arcade style and two text-only adventure gatnes.

The recade game has the rather topical tutle of Escape the Mugger, and you are the rather hapless victim who has to escape. the villain 18 , however, extremely fleet fooled and you tnust exercise a greal deal of cunning in order to avoid being anosher mugging statistic.
Slarship Supernova is a text only adventure. where you are the capsans or a space salvage shsp which happens upon an alsen spaceship heading for a supernovs and destruction. The

out you are given vistal warnnens to the effect that you are nearing the supetnova
The final game on the 1ape is also text only, and places you in as a gunfighter in the old wild wesl
Different factors are given to help you decide on which action to take and your skila wisi decide whet her you clean up the lown or end up dead
Three games on thas tape are very well presented and I found them enterianang and good fon to play. At the combined price of £6.95, good value for money
D. B.
mstructons
playabilty
graphics
value for money
$90 \%$
$90 \%$

W•F-T-T?


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## NO COMMAND MODULE NEEDED

## ADVENTUREMANIA

 Squale reiut search of the hi Joden ngtr ploms willawe you n.juun he


## MANIA

 ktyn a n yej゙ sea ch in he sọend
 to the sul wiss of थ\%

INTRIGUE SOFTWARE
Cranbrook Rd., Tenterden, Kent TN30 6UJ
A leading slock 5 's or drect ${ }^{\prime}$ om us by return o onst


## COMMODORE 64 PROGRAM

Now you too can join in this high speed combat game，using my program for the Commo－ dore 64

The first promt to note about the game is that it is for basic 64，so You Won＇z need Extended Basse，Sumons Basic，or any other add－ons．

A POINT and READ POINT command is buite into the program，and is designed to use multicolour mode，so you can see the different coloured paths of you and your opponent．

The second interesting feature of the game is that the keyboard can be used for both players at the same tume．This is because one of the machine code routines splats the keyboard in two，allowing two people to enter keys at the same ume，so you don＇t need two joysticks to play．

Lightbiker is fast enough－ five moves per second－to make it fun to play，and has one extra feature．

When the game ts normally set，you have a resolution of 160 by 100 to play on，but this can be adjusted in steps of eight by changitg variables XX ando YY \｛e g．if $X X=1$ resolution wil］ be 152 by 100 ）．
Hinis en coavernion
If you are not going to write
machine code，you must have a
high resolution sereen wath
POINT and READ commands．
and a way to split the keybroard
or read iwo joysticks if these
essential 「eatures are not
inculded in your computer，it will
probably nor be passitic to
convert this game
Your program could alsa be
muich shorier，eg limes 120.220
should be replaced by a graphes
clear screen command
Finally，lines 600－760．
incremestiting the lightbike
position in its ditection of
motion，should be adjussed to
your screst format and
recoluion

As your lightbikes have to be set randomly within this area，it is best not to let the resolution fall below 48 by 28，otherwise one of the bikes may be placed outside the playing arema


```
2 REM夏 LIGHTB%KER *
REMM BY #
4 REMM DRVID REES *
```



```
6 %%=0 A% =0: Y%=0 B%=0 C%=0
7 POKE52,31 :POKE56,31'G=0:S(1)=0 S(2)=0
9 REM%FRRENA SIZE: XX AND Y%*
```



```
20 C(1)=85:C(2)=170
29 REM:[L BLUE].[YELLOW]
30 R$\1)="TRIGHT":As(2)="MLEFT"
39 REMWPLRYER RIGHT VARIABLES*
```



Two players both use the keyboard in Lightbiker，a fast－moving game for the commodore 64，by HCW regular David Rees．And there are a few other novel features too


## How it morks

6－80 set up player variables and speed up the game
100－110 sel colours
120－176 ciear high tesolution scteert
180－220 sel high resolution cotours and dispiay
230－250 sen screen memory regts－ sters
$260-245$ draw edge lines
$300-440$ mann couttie
600－760 inerement pixel move－ ment
1000－1070 POKE 5 machale code in
1100－1520 machane code DATA $2000-2250$ ead of game prus do you want another go？
$3000-3110$ display keys ant sereen size

To use the game，RUN it． There will be a delay as machune code DATA is POKEd in．The keys you will use are then displayed as the high resolution screen is cleared

Then the grid edges are drawn and the game starts in earnest．After it is finished，at point is added to the score of the player who won，and you can play another game．
Note：As usual，Commodore BASIC control characters are explamed in REMs in the lines above．These REMs should not be syped in．

## Main Variables

 variables for machine code P，$Q$ lobations of disection regasters
G game number
tit machune code roviunes start pestions
V start of video chip
$\mathbf{X X}$ subtracted from grid width $X$ wards
YY sublemed from grid width Y wards
$\mathrm{C}(1), \mathrm{C}(2)$ players 1,2 colours S（1）． $5(2)$ scores of the players $X(1), A(1), Y(1), B(1)$ player post Lon vanables for player ！

```
40 X(1)=10+XX/2
    50 A(1)=0 Y(1)=INT<RHD(1)*** 12-YY) +12.5
    69 POKE56325,255:POKE56324,255
    65 B(1)=0.POKE 49654,1
    69 REM*PLRYER LEFT UARIABLES*
    70 X(2)=INT (RND (1) 来(20-XX)) +18
    75 f(2)=0: ( (2)=10+4%/2 B(2)=0 POKE49665,3
    80 K=49152 L=49488
    85 IFPEEK (520@0) =0THENGOSUB10戈
    90 GOSUB3000
    99 REM莧GET UP HIRES SCREEN*
    100 V=53248
    110 POKEV+32,2:POKEV+33,6
    120 FORN=8TO15
    129 REM⿱艹⿻丷⿻二丨刂灬丶...[HOME]
    130 POKE648,N⿱4 FRINT"3",
    140 FORM=0T098 PRINT"@COMC口#Rad", NEXT
    150 FOFM=6T033 POKE990+M+N*1624,0 NEXT
    1 6 0 ~ N E X T M
```


## 179 POKE648．4

179 REM盉［HOME］
180 PRINT＂非＂，
189 REM M ．［ELACK］

200 FORN＝0T09
210 POKE56286＋N，0．POKE2014＋N， 126
220 NEXT
230 POKEV＋17．PEEK $\langle\psi+17\rangle$ OR32
240 POKEY $+24,31$
250 POKEV＋22，PEEK（Y＋22）OR16
259 REM莱DRAW SIDE LINES＊
260 C\％$\% 255$
265 FORY＝0T024 FORB＝0T03
$268 \times \%=X X \quad R K=3 \quad Y \%=4 \quad \mathrm{E} \%=B \quad 5 \Psi \xi K$
270 K\％$=39-X X \quad A \%=05 Y S K$
275 NEXTB， V
280 FORX＝0T039 FORA＝3TO日STEP－1
$285 \mathrm{KK}=\mathrm{X}: \mathrm{R} \%=A \cdot \Psi \%=Y Y B \%=0 \cdot S Y S K$
$290 Y \%=24-\Psi Y: B \%=3.5 Y S K$
295 NEXTR． X
299 REM懒MAIN ROUTINE：
300 FORN＝1 TO2
$310 \mathrm{~K} \%=\mathrm{X}(\mathrm{N}) \mathrm{R} \%=\mathrm{F}(\mathrm{N}) \quad \mathrm{Y} \%=\mathrm{Y}(\mathrm{N}) \mathrm{B} \%=\mathrm{B}\langle\mathrm{N})$
$330 \mathrm{C}=\mathrm{C}(\mathrm{N}): S Y S K: I F P E E K(7 B 0)=1$ THEN 2000
340 NEXT
400 SYSL： $\mathrm{N}=1$
410 DHPEEK（P）GOSUB600，650，700，750
$430 \mathrm{~N}=2$ ．ONPEEK（Q）QOSUB600，650， 700,759
440 GOTO30日
599 REM INCREMENT IN DIRECTION：
$600 \mathrm{~B}(N)=B(N)-1$ IFB（N）$)-1$ THEHIRETURN
$610 B(N\rangle=3: Y\langle N\rangle=U\langle N\rangle-1: R E T U R N$
650． $\mathrm{B}(\mathrm{N})=\mathrm{B}(\mathrm{N})+1$ IFB（H）$\langle 4$ THENRETURN
$660 B(N)=0: \psi(M)=\psi(N)+1 \cdot R E T U R N$
$700 \mathrm{~A}(\mathrm{~N})=\mathrm{A}(\mathrm{N}\rangle+1: I F A(N)\langle 4$ THEHRETURN
710 H（N）$=0 \quad X^{\prime}(\hat{j})=X(N)-1$ RETURN
$756 \mathrm{R}(N)=A(N)=1$ ：IFR（N）$)-1$ THENRETURN
$760 \mathrm{~A}(\mathrm{~N})=3: \mathrm{K}(\mathrm{N})=\mathrm{X}(\mathrm{N})+1$ ：RETURN
999 REMMPOKE IN MACHINE CODE＊
1000 FORN $=0$ O1
1016 FORM＝0T0255
1020 READA：IFR $=-1$ THEN1050
1030 POKE49152＋N＊256＋M，A
1040 NEXTM
1050 NEXTN
1050 POKES2000． 1
1070 RETURN
1100 DATF169， $141,52,3,160,3,177,45,10$
1116 IRTA10，10，144， $4,24,238,52,3$
1120 DATA $141,53,3,160,10,17 \vec{r}, 45,168$
1130 DATA $169,1,192,240,9,10,24,10,24$
1140 DATA1 $36,192,208,247,133,251,10,24$
1150 DATA1日1，251，24，141，54，3，169，
1160 DATF1 $33,254,160,17,177,45,168$
1179 DATA192，240，17，169，，24，105，64
1180 DATA $144,3,24,230,254,230,254,136$
1190 DATA192， $208,241,133,253,165,254$
1200 DATA $24,105,32,24,109,52,3,24$
121 G DATA $133,254,173,53,3,24,101,253$
122 IATP144，3，24，230，254，133，253
1230 DATA $60,24,177,45,10,24,133,2,160,31$
124 IRTA $177,45,45,54,3,133,252,169,255$
1250 DATAS $6,237,54,3,24,133,251,164,2$
1260 DATA $177,253,37,251,170,177,253$
1270 DATA $45,54,3,201,246,3,169,1,96$
1289 DATA $138,24,101,252,24,145,253$
1290 DATRE 0 日， $145,253,169,96,-1$
1400 DRTR1 $69,135,141,2,220,32,159,255$
1416 DATA $165,197,201,64,240,36,201,59$
1420 DATA2日8，5，169，1，24，144，24，201，10
$1436 \mathrm{IHTA} 208,5,169,2,24,144,15,201,62$

```
1440 DATA208,5,169,3,24,144,6,261,9
1450 DATA298,5,169,4,141,.194,169,120
1460 DATA141,2,220,32,159,255,169,255
1470 DATA141,2,220,165,197,201,64,208,1
1480 IATA96,201,48,208,5,169,1,24
1499 DFTA144,24,201,53,208,5,169,2
1500 LATA2 4,144,15,201,49,20B,5,169,3
1510 DATF24,144,6,201,54,206,5,169,4
1520 DATA141,1,194,96,-1
1999 REMFWEND OF GRME*
2000 FORT=0T0999:NEXT
2010 FORT=0T09 GETAF NEXT
2020 S(N)=S(N)+1
2030 POKEV+17,PEEK(V+17)AND223
2040 POKEV+24,21
2050 POKEY+22,PEEK(Y+22) RND239
2058 REM|[CLSS][GREEN].[RVS ON]..[GREEN]
2059 REM**[RVS OFF]
```



```
2070 PRINT"WELL DONE*
2079 REM素[DWN]
2080 PRINT"MON GO NUMBER"G
2090 PRINT"THE SCORES FRE:"
2100 PRINTA$(1)" "S(1)
2110 PRINTA$(2)" "S(2)
2129 REM鿓[GREEN]
2130 PRINT"fu"
2200 PRINT"DO YOU WANT RNOTHER GAME (Y/N\?"
2210 GETR夆:IFFF$="U"THĖN10
2220 IFA$=""TKEN2ご10
2230 IFF& < "NNHTHEN2200
2240 POKE56325,68
2350 ENB
2998 REM莱KEY INSTRUCTIONS䝯
2999 REM洣[CLS][L BLUE]..[DWN]
3000 PRINT"IKEYS M"
3049 REM [RVS ON]
3010 PRINT"ELEFT PLFYER "
3020 PRINT"2 UPIQ LEFTWW RIGHTIA IOWN"
3030 PRINT
3039 REM*[RVS ON]
3040 FRINT" -FIGHT PLAHER:"
3050 PRINT"\UPI = LEFTI \uparrow RIGHTI = DONN"
3050 PRINT
3075 PRINT"SCREEN SIZE IS:*
3080 FRINT(20-XX)**;" ACROSS*
3090 PFINT"FNND"
```



```
3110 RETURIN
```



## SPECTRUM PROGRAM

## Treasurre ciwalts <br> Haw it work: <br> 1-35 mutialisation of score, rraphtes, variables <br> 99-239 introduction and insiructions <br> $300-950$ character generation 9y9-1050 pame tereen display <br> 1100-1250 ealrance to dungeon <br> 1253 subroutins ( $8400-8550$ ) to erase display <br> 1254 subrouline ( $8400-8440$ ) for random dumbeon <br> 1299.1334 routane for raom doar 134 -1840 monster attack soutine

1599.2670 player atsacks and adjustment of status scores Check ror dead
3024-3420 room contents, and show which characters are dead
$3500-3550$ check il you've won and if so go to exil routine, olherwate leave foom and cont.mue
3599-3676 diaw exil and show scose
1209.8390 falure routine H899-8990 class descriptions $8995.99 \% 9$ user defined graphes

Is the lure of gold - and the risk of dark caverns whete monsters awatt the unwary your cup of ten?

In Hermon, short for Heroes and Monsters, you take the role of one of four characters' wizard, wartior, priest of theef.
Any combunation of people may play the characters. For example, one person could play all four or two people per character could play.
You will meet tp to im different types of natites and of find all sorts useful equipment lying around. All you have to do is find the goid and escape unhurt!

For those not famular whth this type of game there is a substantal introduction in the listing

Whan RUN there will be a short pause while graphics and vartubles are set up

Dearals of the characters, or classes, can be abraned by pressing key 3. Enter your class in $\mathbf{L}$ mode. Skill tevel is the number of rooms you must expiore before Finding the extc.
If the game is SAVEd using the form "program name" LINE I then when LOADed the game will auto-run.

Uter-itefined graphics a to p are used. Capuals in the PRINT statements should be entered in GRAPHICS mode.

So that's the program. Now It'sinp to you... if you dare.

> Are you brave enough to explore the dark labyrinth where monsters lurk and a treasure chest of gold lies. only the fittest will survive this devilish adventure, written for the 4sk Spectrum by Tim Frost and Simon Welbourne

## SPECTRUM PROGRAM






Page 44 HOME COMPUTING WEEKLY 20 March 1984

SPECTRLIM PGOCRAM


## U.S. ScENE

## Critics cool on CBM 264

I suppose you mught have heard by now that Jack Tramsel, compony founder and pnesident of Commodore, has resigned from the company. Commodore is still reeing under the news. Withn four weeks of Tramel's departure, four other high level Commdore execursves also restgned.

Although the two newest Commodore machines, the $\quad 764$ and 364, were stated for an Aprit defvery date, is seems apparent that the high level shake-up may cause this date to be postponed. Some industry observers feel that without higholevel management welf versed in the computer mdusify, Commodore may be left without a clear cur marketing plan for the rest of this year

Despite thus, it is unikely that the compony will feel any permanent sertbacks in the marketplace. After all, the Commodore 64, with iss under- $\$ 200$ price tag here, has all but ehminated competrion in the low-end home computer market. Since the 64 is selling so well. they can readily afford to hold back the market introduction of the two new machines.

Another prome neason for Commodore to detay the new computers is the critictsm and cool reception given the machimes by some industry anolysts and certain key members of the computing press when ir was learned that nesther machine was soffware compattble with the 64.

Such a move looks bad to thts member of the compusing press; we'll see how much of a factor it is to Commodore in the next months or so.

New Tach Times update. A whtle back I wrote abow the new television show bemg arred on our Pubhc Broadcasfong Network which allows vewers to the thet computers and modems to correspond with the producers of the show.

The hosf, Nicholas Johnson, owhor of How To Talk Back To Your TV Ser, is now on the recerving end of his sdea. Using The Source, an American compuler bulleth board available by subscription, wewers can condacf the show via The New Tech Times Omine service.

The service provides prevews of coming shows, addresses and phone numbers for compantes whose products were shown, Johnson's own syndicated columns, books avalable at dacoumt, uformation on obtointig transcriptions of the show, other spectat offers, and, above all, the chance for viewers to suggest uleas for fiuture shows. Now that's talkm' back.

## 

Is is abow tme? Who knows? According to the prestigious Sianford Resegrch Institute (SRI), the average markel growth of personal computers is expected to slow down and sfabihze so a rate of abouf 5.4 per cent amnually within the next fwo years. SRI has spent abouf $\$ 100,000$ on this research propect.

Part of the resuffs predict that whthy two years mone thart half of alf personal computers sold witf be replacements for oldet machines. The firm also predicts that businesses wifl not be buythg so many personal computers when stand-alone word processors, terminals; and workstations can be tied into thregrored sysrems.

Thes last predictron seems odd to me. Will thmss have gone fult cifcle in two more years? f thought one of the reasons that personal timits wers purchased by busmess people was that that eltminated the need to depend on one central computer timesharing fachury.

Oh, well. People love to re-invent the whed don't they? I'll see you in two years and tet you know what happened.

I'll atso see you next week and fef you know what is happening.
Bud Izea
Farfield, California

## T1．99／4A F Futeen <br> T11．99／4A

## HAVE YOU SEEN THESE GAMES YET？

|  |  |
| :---: | :---: |
| Honchbactic Hrvoch（BAsic） $\mathbf{1 5 . 9 5}$ Arcondesclion Ia TI BASIG Remermith Egor Superb forpliten and aredr lus， |  |
| If you haven＇t yet seen our range of games and utilities for the TI－99／4A，then perhaps it＇s about time you joined in the funl |  |
| Our products are also available from such big TEXAS retallers as Galaxy（Mardstone）－Parco Electrics（Honiton）－Blue Chip Computers （Wigan）and many more． |  |
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Your task le to tet to the inner comuter room by pollectusg keys to each nuccmasive rooni leading to it. Of course there art absiacles in the wiy, and many baddien to thwart your attempss By lig the worst was a big bird, by tesumably op engle. Non that it hures you, far fromit, but the daracd thitag plcki you up and curries you back to the etart of the actech. Your only means of ascent are swo thft moving in opposite directons, If you don'1 get everyathing just right then you

are clobbered and, tf that tsn't enough, yout strength rapidly decreases as you contect whious "thangles" Curiously though. wher the bred carnes you back your streagth teturns After two hours I have not yel managed to get io the second fevel, but l'll get in the seconge it mext time - I've manage if hext ans. That berd is bought a shot gus. That bard is
not zoing to get the better of me. Alihough graplucs wre nothing to write home thourt, movement b quste smooth, and makes for a piayable game
B.B.

## instrectons

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## Frulty Freddy 32K BEC

SofiSpor. 29 South Cres, Pritlewhll. Southend, Essex SS2 6TB
This new and adventurous software house is gotng to make a big mark in BBC soliware Not only does it produce arcade quality games but they are usually gams onnal in concept This game onginal ant the ingredients of us previous offerings: superb colour, fart - almosi supersonic action - and a good humporouts story line too.
You contsol Freddy who thas decided to steal all frunt from the next door garden. He has 10 wat for the flowers to develop frut forst In the meantume he th firss In the meanumes he crazy
assaled by killer bes,

caterpyillars, even birds with killer droppings in an a plant before If the treads ont an piant owner fritit bave developed tive him comes out to give her if the thrashing. There's mare if the frut become overripe il's seeds are dispersed and new plants slart 10 grow making the empryng of the garden more difliculs. There is an insect spray but $I$ found it wasn'i spray, but fons fuls enough for my reeds. Only those very sumble survive to cal the swerts sumbic survi, everything you could want from onew game, meluding that rare eddictive element. D.C.
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Doncaster DN11 9LA Have you ever wantec lom moto fortune by 1 urning Mrames you gord? in Magic Nranes gold control a wiza
to 1 rasmute, him pround the ros collectine all the lead screen collecting
while avolding the maguc meantes who follow his puth. He is amed Who wuts five crystal balls but only wht five four apples which there are also four apple squash you cars use to block or squas pew your pursuets Wuts each of citeen an extre ment lype is added.
different type is option of nine There is wh the pedestrian to sped5, from the pedestran can tso the mposcric. shence the rendion of the Canshence the coll for no apparent

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## ATARI PROCRAM

HCWman, my six-level maze game, runs on any Atari with one joystick.
As you would expect, you gulde HCWman with your joystuck around a maze full of dots.
You musf try to ciear the maze of its dors wnthout being sobbled up by one of the ghosts which are in pursuit of you throughout the game.

Each time you get caught by a ghost you lose one of your three lives.

The dots are worth 10 points each, and note that the ghosts can eat them too!
Posttioned in each corner of the maze are power pills. If you eat one of these you gain threefold:

## Hibis on conversion

 Thus program is in GRAPHICS $1+16$, " lext mode which divides the sereen unto 20 by 20 . The charactert are redefined to lines $140000-14540$STICK (0) reads the Joystuct Line 1200010 l2060 draw the mate using DATA statements PLOT places as single character al position $x, y$, on the screen and DRAWTO draws to position $x, y_{\text {, }}$ from the last position plotted
POSITION puts the cursor it the specified place on the screen LOCATE positions the curtor at the specified place on the screen and reads the coantents under it

How il warks
I have put in a loi of REMarks to guide you through the program

- 25 energy units will be added to the Power time indicator (PT at the bottom of the screen
- The ghosts will frecze
- You can eat the ghosts for a tasty 400 points each untul the PT indicator geaches zero

The power pults are also worth 25 points each.

Each tume you clear the maze

## All the features Of a fun arcade game are in Victor <br> Thorn's program




## Yariablea

CNs halds chareters to be fedelined
CHB starting address of custom character set
CHD starling eddress of each character heid in CHNs
x(0,s) honzontal, vertical posithens of three ghosis
LI lives remantag
SC score
PT pawer, tame remaining
A, B, HCWman's horszontal, rerucal position
ST hoids STICK(0) value
$Z$ character LOCATE vartable
D dots left - there are 196 when the mitere is full
Itsed in FOR ,NEXT loops as abbreviation. $J=P E E K$ (764), which checks for pressed key etc
T used in FOR .NEXT loops, and also wath $X(T)$ and $Y(T)$ where T equals $\mathbf{1}_{4} 2$, or 3
L. decermities how many ghoses are im maze
GP, SP IF GP $=S P$ (speed) THFN move ghosts
CM value of a ane number If last positan of joysuck was right then CM would be he lise number which moves HCWman tigat
CS thput name
NS string array holds name of Top 10 scorert
N0 holds Top 10 scores
of as dots the skill level will merease by one.
There are six skill levets, each selectable from the keyboard it the beguming of each ghane. 1 is easiest, 6 is hardest. These are the differences:

| sldill | No. of | ghost |
| :---: | :---: | :---: |
| 1 | star | ${ }_{\text {slow }}$ |
| 2 | 2 | slow |
| 3 | 3 | slow |
| 4 | I | fast |
| 5 | 2 | fast |
| 6 | 3 | fast |

If your score is among the 10 best you can enter your name + up to 20 letters - in the Top 10

When entering this program I would advise you to leave out all the REMs as it runs considerably faster without them.


## ATARI PROGRAM


$20 E$ LDCATE $A+1, B, Z \approx$ IF $Z=3$ TH THEN EDTO CM
20 EOTG 212

212 JF 2＝134 THEN GOSL日 4000
214 ［F PT $>$ THEN EOSU日 7804

214 cata 300
220－IF 日TC31 THEN 24B
22 B LOCATE $A-1, B, 2 \pm 1 F 2=30$ THEN GOTO CM
229 воTD 232

232 IF 2＝134 THEN EOSUB ARSM
234 JF PT मु THEN GOSUP 7ENA

236 G017 390
24日 1F GTく》14 THEN 30

249 GOTD 232
250 LOCATE $A, B-1,25$ IF 2 m．
252 IF $2=134$ THEN EOSU日 4aBe

255 CM－2waz GOSLB bane：COLOR G：PLOT A．B：B－8－1

E6B［F ET＜＞15 THE：N GOTO CM

264 हOTO 272
270 LDCATE A，日＋1，ZIIF $2=30$ THEN 300
272 tF 2－134 TMEN GOSU日 4900



 6
TRA TF PTME THEN 310

Wh 1 ben

D 日，B，B，ditacta 3ta
310 GP－GP＋IstF GP－日P THEN Ag
320 FOR I＝I TG Labinket floota sen
4me GP－DIIF AC－X（T）THEN 4＊D


41\％IF $2=37$ THEN EOLO




439 TmT＋1ifF T－L THEN T＝1tGOTD 476
465 日ato


4日的 IF $\mathrm{z}=35$ THEN $\mathrm{B}=\mathrm{D}-1$
495 IF $2=37$ THEN BGID
4日日 LOCAYE $X(T Y-Z, Y\{T), Z ı$ tF $2-37$ THEN LOLON BiPLOT XtT：

4\％4 CDLDR BfPLOT X（T），Y（Y）


330 egra 476
390 （F BQ二V（T）THEN 590

556 IF $\mathbf{i}=55$ THEN $\mathrm{D}=\mathrm{BD}^{-1}$
55S 1F 2－37 THEN B01B

，V（T）：Y（T）$-\vee(T)+1+100 T 0$ 6600



605 GOTO 548



62S IF Z＝37 THEN 日Bie



640 V（T） F Y（T） 11 CDLDP 164sPLDT X\｛T，YiTI

尔79 GRta bl






## B1GHEAD






## 75月 gato 10


 fin


Geal RETLARN



 N




 ND G，O，B，CDI OR G：PLDT A，B


－PROGFAMTED DY UICTOR THORN ：POSITITON I1．S



Bees IF I＜SE THAN Ba48
 SyFDR 1－1 JD 13才NEKT J；NEXT F
日2，234，16？， $9,743,217,204,192,162,264,162,121,134,162,29$ 4
BET2 DATA $162,126,13,1$


5
 Tones TMENT＝0




Gits，IF $1=79$ THEN L－3rBaTM Bize






 0．T19： 2 RETUFN


 ごェINFーUT $5:$



 12，56：POE E53，1：RETUFN

 ，FEE TLFNN
110Ne CDLOR 35：FDR T＝1 TD 2：sPLOT I，TBPRAWTD 18，TBNEXT $r=0=1962$ RE FIJAN





$7,2,1,2,2,17,2,0,1,1 b, 1,7,2,16,2, b, 4,17,4,2,4,2,11,4,4$


\＆
 ㅇ，15，19，15， $2,15,3,15,14,15,17,15,5,16,5,17,14,17,14,16$ 2，284B DATA $7,15,7,17,8,17,12,17,12,15,12,14,2,17,2,20$, ， $17,+, 20,4,19,4,20,16,17,16,20,17,17,17,20,1$ 新， $26,15,19$ 12ebs DATA $6,19,13,19,6,20,13,26$





 I It IF Z－114IS THEN TRAP 4goce：RE TLRN
14858 7 ＂ERRDR－CHELK LINES 14BOD TO 14540＂：END
14500 bАТА $255,129,129,129,129,129,129,255,6,0,0,24,24$,
$0,0,6,24,66,126,219,255,235,255,170$
14518 para ©（125，219，255，255，219，102，60，5，24，6B，126， 12 6， 60,24 ，${ }^{\circ}$
1452，DaTh 36，102，231，231，255，255，120， $60,102,102,231,23$ $1,255,255,126,68,8,129,195,231,255,255,126,60,8,0,0,231$
由，24，255， $124,64,0,8,8,8,24,24,126,64,0,0,6,6,24,24,24,6$ ©． 2


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